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EXAMINER	
LU, KUEN S	

ART UNIT	PAPER NUMBER
2167	

DATE MAILED: 02/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/885,902	MASTERS, GRAHAM S.	
	Examiner	Art Unit	
	Kuen S Lu	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 October 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The Applicants' Amendments filed on 10/22/2004 is acknowledged. The Examiner accepted the Amendment to the abstract wherein the phrase "The present invention is directed to..." was deleted. Consequently, the objection to the abstract is withdrawn.

2. The Applicant's Remarks filed on 10/22/2004 is addressed in the "***Response to Arguments***" section following the Office Action for Non-Final Rejection shown next.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-3, 6, 13, 17 and 19-20 are rejected are rejected under U.S.C. 102(e) as anticipated by Wheeler et al. (U.S. Patent 6,738,759, hereafter "Wheeler").

As per claims 1 and 17, Wheeler teaches the following:

"searching for documents identified in a database" (See col. 6, lines 62-64 wherein Wheeler's similarity search may be embedded in a database containing many documents is equivalent to Applicant's searching for documents identified in a database);

"establishing a first search criterion associated with a keyword match between a keyword entry and said identified documents" (See Figs. 12A-12B, col. 6, lines 56-64,

col. 8, lines 50-52 and col. 17, lines 49-55 wherein Wheeler's user specifies search criteria from a schema including searching data about a suspect with height, weight and hair color, and crime description to match with the search criteria is equivalent to Applicant's establishing a first search criterion associated with a keyword match between a keyword entry and said identified documents);

"establishing at least one additional search criterion based on a document attribute of said identified documents" (See Figs. 12A-12B, 21's and col. 17, line 41 – col. 18, line 60 wherein Wheeler's a set of multiple schema search criteria is used for working from a lowest child/object level and up, such as using criteria incident and suspect height to further create separate relation bands incident/suspect and suspect/height is equivalent to Applicant's establishing at least one additional search criterion based on a document attribute of said identified documents);

"determining a criterion matching score for said identified documents for each of said established search criteria" (See Figs. 12A-12B, 27 and col. 23, lines 11-20 wherein Wheeler's

parent node score is computed by combining interior and/or leaf nodes scores representing the similarity between each of the data items and its search criteria is equivalent to Applicant's determining a criterion matching score for said identified documents for each of said established search criteria);

"associating a scaling factor with each of said established search criteria" (See Fig. 13 and col. 14, line 64 – col. 15, line 17 wherein Wheeler's each child object is assigned a

weighting factor is equivalent to Applicant's associating a scaling factor with each of said established search criteria).

"calculating an overall matching score for selected ones of said identified documents from said determined criterion matching scores and said associated scaling factors" (See Fig. 27 and col. 23, lines 11-20 wherein Wheeler's a parent node similarity score is computed wherein the score of similarity of each data item in leaf node and its search criteria is calculated is equivalent to Applicant's calculating an overall matching score for selected ones of said identified documents from said determined criterion matching scores and said associated scaling factors); and

"ordering said selected ones of said identified documents based upon said calculated overall matching scores" (See Fig. 21G and col. 18, lines 53-60 wherein Wheeler's the scoring buffers include an ordered set of scores og matching similarity of data item with search criteria is equivalent to Applicant's ordering said selected ones of said identified documents based upon said calculated overall matching scores).

As per claim 2, Wheeler teaches "database is accessible from a web site and said identified documents are web pages" (See Figs. 7, 23 and col. 7, lines 26-36 wherein Wheeler's the hierarchical documents are stored in Extensible Markup Language (XML) is equivalent to Applicant's database is accessible from a web site and said identified documents are web pages).

As per claim 3, Wheeler teaches "establishing at least one additional search criterion comprises the step of: establishing a search criterion based on a creation date of said identified documents" (See Fig. 21A and col. 17, lines 41-61 wherein Wheeler's the multiple search criteria in the schema including date of an incident is equivalent to Applicant's establishing at least one additional search criterion comprises the step of: establishing a search criterion based on a creation date of said identified documents).

As per claim 6, wherein Wheeler's "establishing at least one additional search criterion comprises the step of: adjusting a scaling factor for at least one of said established search criteria" (See Figs. 10, 13 and col. 15, lines 1-17 wherein Wheeler's user defines the weighting factor of the multiple weighting factors is equivalent to Applicant's establishing at least one additional search criterion comprises the step of: adjusting a scaling factor for at least one of said established search criteria).

As per claim 13, Wheeler teaches the following:
"an interface for receiving search criteria defining at least one keyword query and at least one document attribute query" (See Figs. 2-4 and col. 9, line 64 – col. 10, line 40 wherein Wheeler's schema and document search criteria are being edited by keyword and attribute selection is equivalent to Applicant's an interface for receiving search criteria defining at least one keyword query and at least one document attribute query); and

"an adjustment setting for adjusting a weighting of a search criterion of said search criteria defining said at least one document attribute query" (See Figs. 2-4 and col. 9, line 64 – col. 10, line 40 wherein Wheeler's weighting factors for search criteria are defined is equivalent to Applicant's an adjustment setting for adjusting a weighting of a search criterion of said search criteria defining said at least one document attribute query).

As per claim 19, Wheeler further teaches "generating a scaling factor proportional to said adjusted importance of said at least one document attribute search query" (See Figs. 4A, 10, 13 and col. 15, lines 1-17 wherein Wheeler's user defines the weighting factor of the multiple weighting factors is equivalent to Applicant's generating a scaling factor proportional to said adjusted importance of said at least one document attribute search query).

As per claim 20, Wheeler further teaches "a user-data input mechanism" (See Figs. 2-4s wherein Wheeler's editors for database and document query is equivalent to Applicant's a user-data input mechanism).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 14-15 and 18 are rejected are rejected under U.S.C. 103(a) as being unpatentable over Wheeler et al. (U.S. Patent 6,738,759, hereafter "Wheeler") as applied to claims 1-3, 6, 13 and 17, and further in view of Talib et al. (U.S. Publication 2001/0049677, hereafter "Talib").

As per claim 14, Wheeler teaches search engine for searching documents as previously described in claim 13 rejection.

Wheeler does not specifically teach "search engine operates in conjunction with a world wide web browser and said documents are web pages".

However, Talib teaches "search engine operates in conjunction with a world wide web browser and said documents are web pages" (See Page 6, [0079], Page 9, [0115] and Page 12, [0153] wherein Talib's web site and database are implemented for accessing web pages is equivalent to Applicant's search engine operates in conjunction with a world wide web browser and said documents are web pages).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Talib's teaching with Wheeler reference by further extending web browser as an user interface for documents search because both references are devoted to improve query search by efficient retrieval or optimizing query search pointer, and the combined teaching of the references would have allowed users of Wheeler's system to flexibly utilize and combine multiple categories selection of documents and multiple search criteria for further improving the efficiency of document query.

As per claim 15, Talib further teaches "a document rank calculator for determining a rank of a document of said documents based on said adjusted weighting of said search criterion defining said at least one document attribute query" (See Page 14, [0175] and Page 1, [0012] wherein Talib's a numeric value is scored to every document retrieved, and search engine lists the searched documents in descending order of each keyword appearance frequency is equivalent to Applicant's a document rank calculator for determining a rank of a document of said documents based on said adjusted weighting of said search criterion defining said at least one document attribute query).

As per claim 18, Talib further teaches "a search query directed to a creation date of a web page of said web pages" (See Page 6, [0079], Page 9, [0115] and Page 12, [0153] and Fig. 10, steps 7-8 and Page 10, [0123] wherein Talib's web site and database are implemented for accessing web pages and an additional search criterion is based on document attribute (for example, 'all location' and 'boating') to identify a subset of documents retrieved by the search of keyword match, and further 'date created' is used for constructing a required searching parameter is equivalent to Applicant's a search query directed to a creation date of a web page of said web pages).

7. Claim 4 is rejected are rejected under U.S.C. 103(a) as being unpatentable over Wheeler et al. (U.S. Patent 6,738,759, hereafter "Wheeler") as applied to claims 1-3, 6, 13 and 17, and further in view of Weiss et al. (U.S. Publication 2002/0138487, hereafter "Weiss").

As per claim 4, Wheeler teaches accessing database from a web site and identifying web pages as previously described in claim 2 rejection.

The Wheeler does not specifically teach "establishing at least one additional search criterion comprises the step of: establishing a search criterion based on a number of incoming links to said identified documents".

However, Weiss teaches "establishing a search criterion based on a number of incoming links to said identified documents" (See Page 1, [0016] and Page 2, [0021] wherein Weiss' Google search engine establishes number of incoming links to the web site as an additional search criterion for ranking the web sites which meet the a text-oriented search criterion is equivalent to Applicant's establishing a search criterion based on a number of incoming links to said identified documents).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Weiss' teaching with Wheeler reference by establishing a search criterion based on a number of incoming links to said identified documents because by doing so the importance of a web site is a function of links coming from or pointing to a site could have been established for extending and prioritizing Wheeler's users from the internet, and further, the importance of a web site could have been established for the information of the frequent used keywords and documents stored on the site.

8. Claim 5 is rejected are rejected under U.S.C. 103(a) as being unpatentable over Wheeler et al. (U.S. Patent 6,738,759, hereafter "Wheeler") as applied to claims 1-3, 6, 13 and 17, and further in view of Barr et al. (U.S. Patent 5,742,816, hereafter "Barr").

As per claim 5, Wheeler teaches accessing database from a web site and identifying web pages as previously described in claim 2 rejection.

The Wheeler does not specifically teach does not specifically teach "establishing at least one additional search criterion comprises the step of: establishing a search criterion based on a readability of said identified documents".

However, Barr teaches "establishing at least one additional search criterion comprises the step of: establishing a search criterion based on a readability of said identified documents" (See col. 31, lines 1-25 wherein Barr's determining readability index of a document in the method for identifying documents and multi-media files is equivalent to Applicant's establishing at least one additional search criterion comprises the step of: establishing a search criterion based on a readability of said identified documents).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Barr's teaching with Wheeler reference by establishing a search criterion based on the readability indices for searching documents because by doing so the new search criterion would have further expanded Wheeler's system to search multi-media files for serving a much wider scope of audience.

9. Claims 7-12 and 16 are rejected are rejected under U.S.C. 103(a) as being unpatentable over Wheeler et al. (U.S. Patent 6,738,759, hereafter "Wheeler") as applied to claims 1-3, 6, 13 and 17, and further in view of Lin et al. (U.S. Patent 6,675,159, hereafter "Lin").

As per claim 7, Wheeler teaches adjusting a scaling factor of a search criteria as previously described in claim 6 rejection.

Wheeler does not specifically teach "modifying said adjusted scaling factor in at least two successive searching operations".

However, Lin teaches "modifying said adjusted scaling factor in at least two successive searching operations" (See col. 11, lines 30-49 wherein Lin's using a comparison and ranking algorithms, which adjust 13 types of modifiers, can be invoked to adjust the weight of each factor, to determine the similarity between a query from user and a document, and rank each document based upon a set of criteria is equivalent to Applicant's modifying said adjusted scaling factor in at least two successive searching operations).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Lin's teaching with Wheeler reference by adjusting a set of weighting factors for document retrieval because by doing so the combined reference would have enabled Wheeler's system to further accurate the importance of the specific search criteria in order to yield a more accurate query result.

As per claims 8 and 9, Lin further teaches "manually adjusting said scaling factor" and "automatically adjusting said scaling factor" (See the Abstract and col. 11, lines 30-49 wherein Lin's using a comparison and ranking algorithms automatically or manually, which adjust 13 types of modifiers, can be invoked to adjust the weight of each factor, to determine the similarity between a query from user and a document, and rank each document based upon a set of criteria is equivalent to Applicant's manually adjusting said scaling factor and automatically adjusting said scaling factor).

As per claim 10, Lin further teaches "selecting a numerical range for a criterion matching result of at least one of said established search criteria" (See col. 25, lines 6-29 wherein Lin's a query topic specific classifier returns a probability values which suggests ranging between 0 and 100% is equivalent to Applicant's selecting a numerical range for a criterion matching result of at least one of said established search criteria).

As per claim 11, Lin further teaches the following:
"mapping said criterion matching result into said selected numerical range" (See col. 25, lines 6-29 wherein Lin's a probability value is mapped between 0 and 100% is equivalent to Applicant's mapping said criterion matching result into said selected numerical range);
"selecting an origin offset associated with said mapped criterion matching result" (See col. 25, lines 6-29 wherein Lin's an offset to the probability values is 0% is equivalent to Applicant's selecting an origin offset associated with said mapped criterion matching result); and

"adding said mapped criterion matching result and said selected origin offset" (See col. 25, lines 6-29 wherein Lin's a query topic specific classifier returns a probability values 60, 30 and 10% which have been added with an offset value 0% is equivalent to Applicant's adding said mapped criterion matching result and said selected origin offset).

As per claim 12, an official notice is taken that the calculations of (1). Multiplying of a score and scaling factor, (2). squaring, (3). summing and (4). taking square root of the sum, were well known elementary statistical operations at the time the invention was made. It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine the calculations Lin's system with Wheeler's system because it is a formula for measuring the degree of match between searching criteria and document retrieved.

As per claim 16, Lin further teaches "a normalization algorithm for mapping a naturally occurring numeric range of results returned for said search criterion defining said at least one document attribute query into a user-defined range" (See the Abstract and col. 11, lines 30-49 and col. 25, lines 6-29 wherein Lin's using a comparison and ranking algorithms automatically or manually, which adjust 13 types of modifiers, can be invoked to adjust the weight of each factor, to determine the similarity between a query from user and a document, and rank each document based upon a set of criteria, and a query topic specific classifier returns a probability values which suggests ranging between 0 and 100% and at col. 25, lines 6-29 where a probability value is mapped between 0 and 100% is equivalent to Applicant's a normalization algorithm for mapping a naturally occurring numeric range of

results returned for said search criterion defining said at least one document attribute query into a user-defined range).

Conclusions

10. The prior art made of record

A. U.S. Publication 2001/0049677

C. U.S. Publication 2002/0138487

D. U.S. Patent 5,742,816

E. U.S. Patent 6,675,159

I. U.S. Patent 6,738,759

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

B. U.S. Publication 2003/0088545

F. U.S. Publication 2003/0078913

G. U.S. Patent No. 6,633,868

H. U.S. Patent No. 6,449,598

Response to Arguments

11. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusions

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuen S Lu whose telephone number is 571-272-4114. The examiner can normally be reached on 8 AM to 5 PM, Monday through Friday.

If at tempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on 571-272-4107. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-252-2100.

Kuen S. Lu
Patent Examiner

February 10, 2005

Luke Wassum
Primary Examiner

February 10, 2005